#6

NAME AND TITLE: Michael J. Adang
Associate Professor

BIRTHPLACE & DATE:
Quebec, Canada, 1951

EDUCATION:
B.S. Indiana University
M.Sc. Washington State University
Ph.D. Washington State University

PROFESSIONAL EXPERIENCE:
1988-Present, Department of Entomology, University of Georgia, Athens, Ga. Associate Professor
1982-1988, Senior Scientist, Agrigenetics Advanced Science Company
1980-1981, Postdoctoral fellow, University of Idaho

MAJOR INTERESTS:
Molecular genetics and mode of action of Bacillus thuringiensis insecticidal crystal proteins
Genetic engineering of plants for insect resistance

PUBLICATIONS:

Refereed journals: 9; Book chapters: 6

Brandt, C. R., M. J. Adang, and K. D. Spence (1978) The peritrophic memebrane: Ultrastructural analysis and function as a mechanical barrier to microbial infection in Orgyia pseudotsugata. J. Invert. Pathol. 32: 12-24.

Adang, M. J., and K. D. Spence (1981) Surface morphology of peritrophic membrance formation in the cabbage looper, Trichoplusia ni. Cell Tissue Res. 218: 141-147.

Adang, M. J., and K. D. Spence (1982) Biochemical comparisons of the peritrophic membranes of the lepidopterans Orgyia pseudotsugata and Manduca sexta. Comp. Biochem. Physiol. 73B: 645-649.

Adang, M.J., and L.K. Miller (1982) Molecular cloning of DNA complementary to mRNA of the baculovirus Autographa californica nuclear polyhedrosis virus: Location and gene products of RNA transcripts found late in infection. J. Virol. 44: 782-793.

Adang, M. J., and K. D. Spence (1983) Permeability of the peritrophic membrane of the Douglas Fir Tussock Moth (Orgyia pseudotsugata). Comp. Biochem. Physiol. 75A: 233-238.

Miller, L. K., D. W. Miller, and M. J. Adang (1983) An insect virus for genetic engineering: Developing baculovirus polyhedrin substitution vectors. In: Genetic Engineering in Eukaryotes, P. F. Lurquin and A. Kleinhofs (eds.). Plenum publishing Corp.

Miller, L. K., M. J. Adang, and D. Browne (1983) Protein kinase activity associated with the extracellular and occluded forms of the baculovirus Autographa californica nuclear polyhedrosis virus. J. Virol. 46: 275-278.

Slighton, J. L., M. J. Adang, D. R. Ersland, L. M. Hoffman, M. J. Murray and T. C. Hall (1983) French bean storage protein gene family: Organization, nucleotide sequence and expression. In Manipulation and Expression of Genes in Eukaryotes. P. Nagley, A. W. Linnane, W. J. Peacock, J. A. Pateman (eds.) Academic Press, pp. 123-142.

Hall, T. C., J. L. Slighton, D. R. Ersland, M. G. Murray, L. M. Hoffman, M. J. Adang, J. W. S. Brown, Y. M., J. A. Mathews, J. H. Cramer, R. F. Barker, D. W. Sutton, and J. D. Kemp (1983) Phaseolin: Nucleotide sequence explains molecular weight and charge heterogeneity of a small multigene family and also assists vector construction for gene expression in alien tissue. In: Structure and Function of Plant Genomes. O. Ciferri, L. Dure (eds.) Plenum Press, pp. 123-142.

Talbot, D. R., M. J. Adang, J. L. Slighton, and T. C. Hall (1984) Size and Organization of a multigene family encoding phaseolin, the major seed storage protein of Phaseolus vulgaris L. Mol. Gen. Genet. 198: 42-49.

Adang, M.J., M.J. Staver, T.A. Rocheleau, J. Leighton, R.F. Barker, and D.V. Thompson (1985) Characterized full-length and truncated plasmid clones of the crystal protein of Bacillus thuringiensis subsp. kurstaki HD-73 and their toxicity to Manduca sexta. Gene 36: 289-300.

Adang, M.J., E. Firoozabady, J. Klein, D. DeBoer, V. Sekar, J.D. Kemp, E. Murray, T.A. Rocheleau, K. Rashka, G. Staffeld, C. Stock, D. Sutton, and D.J. Merlo (1986) Expression of a Bacillus thuringiensis insecticidal protein gene in tobacco plants. In: Molecular Strategies for Crop Protection. UCLA Symposia on Molecular and Cellular Biology, New Series, Volume 48. C. Arntzen and C. Ryan (eds.) Alan R. Liss, Inc. New York, NY.

Sekar, V., Thompson, D.V., Maroney, M.J., Bookland, R., and M.J. Adang (1987) Molecular cloning and characterization of the insecticidal crystal protein gene of Bacillus thuringiensis var. tenebrionis. Proc. Natl. Acad. Sci. USA 84: 7036-7040.

Adang, M.J., K.F. Idler, and T.A. Rocheleau (1987) Structural and antigenic relationships among three insecticidal crystal proteins of Bacillus thuringiensis subsp. kurstaki. In: Biotechnology in Invertebrate

Pathology and Cell Culture. K. Maramorosch (ed.) Academic Press. Inc., New York.

Adang, M., D. DeBoer, J. Endres, E. Firoozabady, J. Klein, A. Merlo, D. Merlo, E. Murray, K. Rashka, and C. Stock. (1988) Manipulation of Bacillus thuringiensis genes for pest insect control. Proceedings "Biotechnology, Biological Pesticides, and Novel Plant-Pest Resistance for Insect Pest Management." Cornell University.

PATENT APPLICATIONS:

Insect Resistant Plants. 1983. M.J. Adang and J.D. Kemp
Insecticidal Protein Fragments. 1984. M.J. Adang
Insecticidal Rhizobiaceae. 1985. M.J. Adang and E.A. Appelbaum
Insecticidal Pseudomonads. 1986. C. Stock, J. Klein, T. McGloughlin, and M.J. Adang
Anti-coleopteran toxin and gene. V. Sekar and M.J. Adang
Synthetic Insecticidal Crystal Protein Gene. 1988. M.J. Adang, T.R. Rocheleau, D.J. Merlo, and E. Murray.